

DIVISION OF INDUSTRY SERVICES
Plumbing Product Review
P.O. Box 2658
Madison, Wisconsin 53701-2658
TTY: Contact Through Relay

Scott Walker, Governor Dave Ross, Secretary

February 25, 2013

DURASTILL INCORPORATED DAVID BILLIARD 4200 NE BIRMINGHAM RD KANSAS CITY MO 64117

Re: Description: WATER TREATMENT DEVICE - POU DISTILLATION

Manufacturer: DURASTILL INCORPORATED Product Name: DURASTILL DISTILLERS

Model Number(s): 30H, 30J, 30J-40, 46A, 46C-40 and 46C-96L

Product File No: 20130048

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of February 2018.

This approval is contingent upon compliance with the following stipulation(s):

- The electric service to these devices must be provided via a ground fault circuit interrupter (GFCI) receptacle.
- These devices must be installed in a well ventilated area.
- This product has undergone sufficient testing to document the product's ability to reduce only those
  contaminants and/or substances as specified in this approval letter when the product is installed and
  maintained in strict accordance with the manufacturer's published instructions.
- Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 267-9787.
- If these approved devices are modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.
- The system shall be provided with an in-line total dissolved solids (TDS) monitor, or other acceptable
  means, to warn the user when the system is not performing it's functions. Acceptable alternatives to
  an in-line TDS monitor include:
  - 1. Terminating the discharge of treated water;
  - 2. Sounding an alarm which is connected to acceptable power source;
  - 3. Flashing a light connected to an acceptable power source;
  - 4. Providing the user with an obvious, readily interpretable, indication of the system's ability to perform (e.g. decreasing the flow rate of treated water by 50% or more for systems making mechanical filtration claims;

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- 5. Providing a sampling service by the manufacturer, either directly or through an authorized dealer, a minimum of once every six months;
- 6. Providing a sampling kit for analysis of TDS or other appropriate contaminants; or
- 7. Providing a TDS monitor to measure the product water quality.

Whichever means of performance verification is selected, it shall be clearly described in the owner's manual for this device, and approved for use along with the device.

Based on testing data submitted to and reviewed by the department, this approval recognizes that these plumbing products will reduce the concentration of contaminants as specified on pages 1 through 2 of this letter.

## INORGANIC CONTAMINANT REDUCTION CAPABILITIES PRODUCT FILE NUMBER 20130048 TABLE 1 OF 1

**Product Water Production Rate:** 30 series models = 30.3 liters per day (lpd) [8.0 gallons per day (gpd)] 46 series models = 45.4 lpd (12.0 gpd)

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Tested Contaminant
                                                                               Influent Challenge (mg/l)
          Arsenic (As<sup>+3</sup> + As<sup>+5</sup>
Barium (Ba<sup>+2</sup>)*
                                                                            0.30 ± 10% (added as trivalent)
                                                                                        10.0 ± 10%
                Boron (B+3)
                                                                                        5.0 ± 10%
             Cadmium (Cd+2
                                                                                        0.03 \pm 10\%
             Chromium (Cr+3
                                                                             0.3 ± 10% (added as trivalent)
             Chromium (Cr+6)
                                                                           0.3 ± 10% (added as hexavalent)
               Copper (Cu<sup>+2</sup>)
                                                                                        4.0 ± 10%
                Lead (Pb+2)
                                                                                        0.15 ± 10%
       Molybdenum (Mo<sup>+4</sup> + Mo<sup>+6</sup>)
                                                                                        0.2 ± 10%
               Nitrate (NO<sub>3</sub>)
                                                                                        30.0 ± 10%
         Selenium (Se<sup>+4</sup> + Se<sup>+6</sup>)
                                                                 0.10 \pm 10\% (added as ½ selenite and ½ selenate)
Total Dissolved Solids (NaCl surrogate)*
                                                                                       1,000 ± 10%
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\*Based on the study "Evaluation of Total Dissolved Solids as a Surrogate Parameter for the Reduction of inorganic Contaminants by Distillation Systems," conducted for the Water Quality Association by NSF International, 1991, TDS may be used as a surrogate for verifying the reduction of arsenic, barium, cadmium chromium, copper, lead, nitrate and selenium to equal to or below their respective MCL's when tested in accordance with NSF Standard 62, annex B. This surrogate has been expanded to cover the WDNR Enforcement Standards for boron and molybdenum (see NR 140.10 Table 1).

mg/l = milligrams per liter, mg/l are equivalent to parts per million (ppm)

 $\pm$  = plus or minus

This device was tested under controlled laboratory, or field, conditions. The actual performance of this device for a specific end use installation will vary from the tested conditions based on local factors such as water pressure, water temperature and water chemistry. The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen W. Schlueter Plumbing Product Reviewer Department of Safety and Professional Services Division of Industry Services Bureau of Technical Services (608) 267-1401 Phone (608) 266-2602 Fax glen.schlueter@wi.gov E-mail